

## AMENDMENTS TO THE CLAIMS

### **Claims 1-23 (Canceled)**

**Claim 24 (Currently Amended)** A thermal barrier coating arrangement comprising:

a base material of a heat resistant alloy; and

a ceramics layer formed on said base material for enhancing heat resistance of said base material;

wherein said ceramics layer comprises  $ZrO_2$  provided with  $Yb_2O_3$  of 15 to 10-weight % or more and 20 to 25-weight % or less as a stabilizer;

wherein said ceramics layer has cracks introduced into said ceramics layer that extend in a thickness direction of said ceramics layer;

wherein said cracks are introduced into said ceramics layer such that they extend in a range of  $\pm 40^\circ$  relative to a normal line to a face of said ceramics layer and not outside the range; and

wherein said ceramics layer has fine pores formed therein and a porosity of said pores relative to said ceramics layer is 8% or more and 15% or less.

### **Claims 25-33 (Canceled)**

**Claim 34 (Previously Presented)** A thermal barrier coating arrangement as claimed in Claim 24, wherein an interval between adjacent said cracks is 0.05 to 1 times the thickness of said ceramics layer.

**Claim 35 (Previously Presented)** A thermal barrier coating arrangement as claimed in Claim 24, wherein said ceramics layer in which said cracks are introduced has a corrosive component penetration preventing layer that is made of the same material as said ceramics layer and is formed on said ceramics layer.

**Claim 36 (Previously Presented)** A thermal barrier coating arrangement as claimed in Claim 35, wherein said corrosive component penetration preventing layer has a thickness of 5 to 50  $\mu m$  and a

porosity of 4 to 20%.

**Claim 37 (Previously Presented)** A thermal barrier coating arrangement as claimed in Claim 24, wherein a metallic bond layer is provided between said base material and said ceramics layer.

**Claim 38 (Previously Presented)** A turbine part comprising a thermal barrier coating as claimed in Claim 24.

**Claim 39 (Previously Presented)** A gas turbine comprising a turbine part as claimed in Claim 38.

**Claim 40-42 (Canceled)**

**Claim 43 (New)** A thermal barrier coating arrangement comprising:

- a base material of a heat resistant alloy; and
- a ceramics layer formed on said base material for enhancing heat resistance of said base material;

wherein said ceramics layer comprises  $ZrO_2$  provided with  $Yb_2O_3$  of 16 weight % as a stabilizer;

wherein said ceramics layer has cracks introduced into said ceramics layer that extend in a thickness direction of said ceramics layer;

wherein said cracks are introduced into said ceramics layer such that they extend in a range of  $\pm 40^\circ$  relative to a normal line to a face of said ceramics layer and not outside the range; and

wherein said ceramics layer has fine pores formed therein and a porosity of said pores relative to said ceramics layer is 8% or more and 15% or less.

**Claim 44 (New)** A thermal barrier coating arrangement as claimed in Claim 43, wherein an interval between adjacent said cracks is 0.05 to 1 times the thickness of said ceramics layer.

**Claim 45 (New)** A thermal barrier coating arrangement as claimed in Claim 43, wherein said

ceramics layer in which said cracks are introduced has a corrosive component penetration preventing layer that is made of the same material as said ceramics layer and is formed on said ceramics layer.

**Claim 46 (New)** A thermal barrier coating arrangement as claimed in Claim 45, wherein said corrosive component penetration preventing layer has a thickness of 5 to 50  $\mu\text{m}$  and a porosity of 4 to 20%.

**Claim 47 (New)** A thermal barrier coating arrangement as claimed in Claim 43, wherein a metallic bond layer is provided between said base material and said ceramics layer.

**Claim 48 (New)** A turbine part comprising a thermal barrier coating as claimed in Claim 43.

**Claim 49 (New)** A gas turbine comprising a turbine part as claimed in Claim 48.